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09/091,508 10/30/98 CONNORS J 68567/PALL

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SUITE 300
WASHINGTON DC 20005

IM62/0719

EXAMINER

OCAMPO, M

ART UNIT

PAPER NUMBER

1723

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DATE MAILED:

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Please find below and/or attached an Office communication concerning this application or proceeding.

Commissioner of Patents and Trad marks

Office Action Summary

Application No.
09/091,508

Applicant(s)

Connors et al.

Examiner
Marianne S. Ocamp

Group Art Unit
1723



☒ Responsive to communication(s) filed on Apr 27, 2000

☐ This action is **FINAL**.

☐ Since this application is in condition for allowance except for formal matters, **prosecution as to the merits is closed** in accordance with the practice under *Ex parte Quayle*, 1035 C.D. 11; 453 O.G. 213.

A shortened statutory period for response to this action is set to expire 3 month(s), or thirty days, whichever is longer, from the mailing date of this communication. Failure to respond within the period for response will cause the application to become abandoned. (35 U.S.C. § 133). Extensions of time may be obtained under the provisions of 37 CFR 1.136(a).

Disposition of Claim

☒ Claim(s) 1-4 is/are pending in the application

Of the above, claim(s) _____ is/are withdrawn from consideration

☒ Claim(s) 1-4 is/are allowed.

☐ Claim(s) _____ is/are rejected.

☐ Claim(s) _____ is/are objected to.

☐ Claims _____ are subject to restriction or election requirement.

Application Papers

☐ See the attached Notice of Draftsperson's Patent Drawing Review, PTO-948.

☒ The drawing(s) filed on Oct 30, 1998 is/are objected to by the Examiner.

☐ The proposed drawing correction, filed on _____ is ☐ approved ☐ disapproved.

☐ The specification is objected to by the Examiner.

☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. § 119

☐ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).

☐ All ☐ Some* ☒ None of the CERTIFIED copies of the priority documents have been

☐ received.

☐ received in Application No. (Series Code/Serial Number) _____.

☐ received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

*Certified copies not received: _____

☒ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).

Attachment(s)

☒ Notice of References Cited, PTO-892

☐ Information Disclosure Statement(s), PTO-1449, Paper No(s). _____

☐ Interview Summary, PTO-413

☐ Notice of Draftsperson's Patent Drawing Review, PTO-948

☐ Notice of Informal Patent Application, PTO-152

— SEE OFFICE ACTION ON THE FOLLOWING PAGES —

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DETAILED ACTION

Priority

1. An application in which the benefits of an earlier application are desired must contain a specific reference to the prior applications in the first sentence of the specification (37 CFR 1.78). If applicant desires priority under 35 U.S.C. 119 (e) based upon a previously filed copending application, specific reference to the earlier filed application must be made in the instant application. This should appear as the first sentence of the specification following the title, preferably as a separate paragraph. The status of the parent application(s) (whether patented or abandoned) should also be included. If a parent application has become a patent, the expression "now Patent No. _____" should follow the filing date of the parent application. If a parent application has become abandoned, the expression "now abandoned" should follow the filing date of the parent application.

Status of the Claims

2. Claims 5 - 13 had been canceled based on amendment filed 4-27-00, and claims 1 - 4 are still pending.

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Drawings

3. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the hollow separation arrangement comprising two or more packs sections and including joiner caps coaxially securing the pack sections must be shown or the feature should be canceled from claim 1. No new matter should be entered.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless --

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

5. Claim 4 is rejected under 35 U.S.C. 102(b) as being anticipated by Marshall (U.S. 4,634,527).

Marshall (527) discloses a separation element comprising a pack (10, 12) including a porous medium and a first end, and an end cap (14, 16) having a first segment (16), a second

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segment (14) mounted to the first end of the pack (10, 12) and a sealing member (26) coupled to at least one of the first and second segments (14, 16), and the first segment (16) slidably engaging the second segment (14) such that the sealing member (26) is relaxed in a first position, and in a second position, the sealing member is compressed by the first and second segments (14, 16), thereby energizing the sealing member (26) and has an outer diameter greater than the outer diameter of the second segment (14) of the end cap, as in fig. 1 and col. 2 (claim 4).

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claims 1 - 2 are rejected under 35 U.S.C. 103(a) as being unpatentable over Eckman (U.S. 5,470,469).

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Eckman (469) discloses a separation element comprising two or more hollow pleated pack sections (60, 60', 60"), each having first and second ends and interior and including a porous medium (membrane) comprising polymeric material, as in figs. 1 - 3 and col. 12, lines 16 - 20 and 33 - 37, and joiner caps (28) attached to at least one end of each of the two or more pack sections (60, 60', 60"), adjacent joiner caps connected to coaxially secure the pack sections and joiner caps into a hollow separation arrangement having an interior diameter of 5cm (about 2 inches) to 50 cm (about 20 inches), as in col. 12, lines 50 - 52, and first and second end caps (28, 29) attached to the hollow separation arrangement, wherein one of end caps (29) comprises a seal having an outside diameter greater than the largest outside diameter of the hollow separation arrangement (60), as in fig. 2. Although Eckman does not explicitly disclose the hollow separation arrangement (60, 60", 60") being at least about 40 inches, it is obvious that upon stacking of at least two hollow packs/cartridges (60, 60', 60") to make a unitary hollow separation element, as in fig. 3, and depending upon the individual lengths of each hollow pack (60), conditions for filtration such as operating pressures, and needed size/length by the user, the overall length of the resulting hollow separation arrangement would include at least a length of about 40 inches, as in col. 13, lines 1 - 4 (claim 1).

Eckman also discloses each of the hollow pleated packs (60) could be of any length or size, including being at least 40 inches in length, depending upon the conditions of filtration process, such as operating pressure, as in col. 12, lines 29 - 33. Eckman also discloses the seal of

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end cap (29) having a larger outside diameter than the largest diameter of the hollow pleated pack (60) and the other end cap (28), as in fig. 2. It is also obvious that depending upon materials available and end uses of the hollow pleated packs and design of the manufacturer, the length of each of the pack may be varied in sizes and can include at least 40 inches in length (claim 2).

8.. Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over Eckman (469) in view of Heybutzki et al. (U.S. 5,332,410) or Ciliberti et al. (U.S. 4,735,638).

Eckman (469) has been expanded above. Eckman has disclosed a separation element comprising a pack (60) including a porous medium and a first end and having an interior diameter greater than about 2 inches, and an end cap including a first segment (lower or bottom end portion) mounted to the first end of the pack (60) and a second segment (upper or top end portion) spaced a certain (first) distance from the first segment of the end cap and the first end of the pack, as in and figs. 1 - 3 and col. 12, lines 50 - 52. However, Eckman fails to disclose the end cap being extendable from a first position in which the first and second segments are spaced a distance from each other to a second position in which the first and second segments are spaced a second distance from each other, wherein the second distance is greater than the first distance. Heybutzki et al. (410) teach an extendable end cap for a separation/filter element having first and second segments (1, 1'), wherein the first segment (1) is attached/mounted to a first end of the filter element and the second segment (1') is spaced from the first end of the filter element/first

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segment (1) a first distance in a first position (relaxed) and a second distance in a second position (extended), respectively, as in figs. 5 - 6 and cols. 3 - 4. Alternatively, Ciliberti et al. (638) teach an extendable end cap for a separation element, wherein the end cap having first and second segments (101, 103), the first segment (101) attached to a first end of the element and the second segment (103) is spaced a first distance from the first segment in a first position (relaxed or normal position) to a second position in which the first and second segments are spaced a second distance from each other, wherein the second distance is greater than the first distance, as in fig. 5 and cols. 7 - 8 (claim 3). It is considered that it would have been obvious to one of ordinary skill in the art at the time of the invention to modify the end cap of the separation element of Eckman (469), by substituting it with the end cap taught by Heybutzki et al. (410) or Ciliberti et al. (638), in order to provide an improved end cap capable of relieving stresses and accommodate displacements or any movements arising from a thermal expansion or any lateral deviations of the filter element during filtration.

Response to Amendment

9. Applicant's arguments with respect to claims 1- 4 have been considered but are moot in view of the new grounds of rejection. This action is non-final.

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Conclusion

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Marianne S. Ocampo, whose telephone number is (703) 305-1039. The examiner can normally be reached on Monday - Friday from approximately 8:00AM - 4:30PM.

11. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Wanda L. Walker, can be reached on (703) 308-0457.

12. The fax phone number for **Unofficial** faxes (i.e. faxes not to be entered, drafts) for Technology Center 1700 is (703) 305-3602. The fax number for **Official** faxes (i.e. faxes to become part of the file history) for this Center is (703) 305-3599. When filing a fax in Technology Center 1700, please indicate in the Header (upper right) "Official" for papers that are to be entered into the file, and "Unofficial" for draft documents and other communication with the PTO that are not for entry into the file of the application. This will expedite processing of your papers.

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13. Any inquiry of a general nature or relating to the status for this application should be directed to the Group receptionist, whose telephone number is (703) 308-0661.

M. S. O.

July 17, 2000

Walker
W. L. WALKER
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 1700